



FPM 216 - Requirements and Systems Management

MCI Course Number: 6889

Length: 3 days

Course Description

In today's federal environment, agencies are faced with the challenges of tight economic conditions, ever-shifting priorities, and a growing public demand to deliver results. Project managers require a knowledge of the requirements development process, decision analysis methods, technical assessment, configuration management, and interface management.

This course provides the foundation for effective requirements development and systems management. It satisfies the Requirements Development and Management Processes, Systems Engineering, Test and Evaluation, and Life Cycle Logistics performance outcomes necessary for the Federal Acquisition Certification for Program and Project Managers (FAC-PPM) Level 2. Additionally, this course addresses several FAC-PPM IT Core-Plus performance outcomes.

Course Learning Objectives

- Illustrate the federal acquisition process and the key planning documentation used by program managers
- Analyze the role of the program manager in developing and managing requirements
- Discuss key technical management processes and tools used in systems engineering
- Evaluate the importance of the test and evaluation process in acquisition decisions
- Discuss the application of Total Life-Cycle Systems Management (TLCSM)
- Create an on-the-job (OTJ) action plan

Intended Audience

This course is intended for program and project management professionals seeking their FAC-PPM Level 2.

Prerequisites

- Students must satisfy the competency requirements for FAC-PPM Level 1

Pework

Students must complete the following prior to attending class:

- eLearning module on "The Federal Acquisition Environment"
- Pre-assessment of experience and expertise with relevant FAI Performance Outcomes. A personalized report will be generated for students upon completion of the pre-assessment.

Course Schedule

DAY ONE	
MORNING	Lesson 1: Federal Acquisition Overview
LUNCH	
AFTERNOON	Lesson 2: Requirements Development and Program Management

DAY TWO	
MORNING	Lesson 3: Systems Engineering
LUNCH	
AFTERNOON	Lesson 3: Systems Engineering (continued)
	Lesson 4: Test and Evaluation

DAY THREE	
MORNING	Lesson 4: Test and Evaluation (continued)
	Lesson 5: Life Cycle Logistics
LUNCH	
AFTERNOON	Lesson 5: Life Cycle Logistics (continued)
	Course Exam

Learning Methods

Presentation, class discussions, practical activities, group and individual exercises, and action planning for on-the-job implementation.

Requirements for Successful Completion

Full (100%) attendance is expected and required. Successful completion of the course depends on full class attendance and active participation in individual and group exercises.

The final exam must be completed with a grade of 80% or higher.

Credits

National Association of State Boards of Accountancy (NASBA)

- Field of Study: Management Advisory Services
- Level: Intermediate
- CPEs: 24

Professional Development Units (PDUs)

- Credits: 21

Continuous Learning Points (CLPs)

- Credits: 24

Third-Party Certification Relationship

This course addresses the following FAI performance outcomes: Federal Acquisition Institute 2013

"Requirements Development and Management Processes:

- Illustrate the criticality of user/mission requirements in performing project management functions.
- Apply government and agency acquisition policies to meet user/mission requirements.
- Relate how acquisition programs exist in size and scope along a continuum of increasing complexity, mission criticality, cost and level of control and oversight.
- Discover the scope and purpose of systems acquisition management as an integration of the primary functions of: (1) requirements development and management; (2) systems engineering; (3) test and evaluation; (4) life-cycle logistics; (5) contracting; (6) business, cost estimating and financial management; and (7) leadership.
- Formulate an Acquisition Strategy that incorporates risk mitigation strategies.
- Clarify alternative concepts that efficiently meet mission capability gaps.
- Determine requirements and assist in the planning for technology and business management throughout the acquisition process.
- Prepare an Integrated Master Plan that reflects the tenets of total life cycle system management.
- Assist in the development of an estimate of TOC in agency format.
- Formulate the key features of a risk/opportunity management process.
- Apply effective oral and written capabilities to communicate project needs and expectations.
- Form and lead working groups as Integrated Project/Product Teams.

Systems Engineering:

- Apply quantitative and qualitative analytical techniques for decision making.
- Justify and explain the benefits of using balanced and goal oriented performance measures in managing a system design effort.
- Develop and demonstrate effective technical performance measures to monitor system performance.
- Develop and apply a viable risk/opportunity management plan in the context of systems engineering (SE).
- Administer and assess technical assessment plans and decision analysis methods.
- Apply key technical management processes and tools used in the SE process, including: configuration management, technical performance measures, and technical design reviews.
- Structure an effective requirements development and management process that traces engineering and technical specification requirements back to the user's system requirements.
- Develop and apply a process for monitoring and selecting a balanced systems design solution.
- Apply best practice processes for monitoring and selecting a systems design accounting for: environmental, safety and occupational health (ESOH); human factors; and security requirements.

- Comprehend the systems life-cycle management concepts used for information technology (IT) systems.
- Illustrate the main causes of software program problems.
- Comprehend the major provisions of the Information Technology Management Reform (Clinger-Cohen) Act.
- Compare and contrast the common software acquisition strategies and software development paradigms.
- Recognize the best practices used in the Federal Government to improve efficiency and effectiveness of software acquisitions.

Test and Evaluation:

- Select and apply efficient and cost effective methods for planning, monitoring, conducting, and evaluating tests of developmental, non-developmental, commercial or modified systems.
- Comprehend the differences in type and scope of test and evaluation required for different program types, including commercial-off-the-shelf, non-developmental, and developmental programs.
- Formulate the test and evaluation strategy for a program, accounting for the differences in hardware centric and information technology centric systems, that demonstrates system performance requirements and progressively reduces program risk.

Life Cycle Logistics

- Analyze the product support elements and apply the concept of integrated product support in the formulation of a product support plan.
- Administer performance-based logistic efforts that optimize total system life cycle cost while maintaining system readiness.
- Analyze a systems design for availability, supportability, and reliability/maintainability and link this analysis to how the design balances the need to minimize cost, reduce the logistic footprint, provide operational readiness and account for interoperability requirements.
- Propose appropriate alternative logistics support strategies and practices.
- Track and act upon logistic analysis results early in the system development process so that balanced adjustments in the system design can be enacted which reduce the required support resources and overall life cycle costs.

IT Core-Plus

- Comprehend and apply principles of modular development to support IT development and delivery
- Develop both systematic/design and workforce change management strategies integrated with Business Process Reengineering efforts
- Correlate additional federal IT-specific guidance and requirements
- Identify and analyze COTS technology solutions and evaluate associated business process reengineering efforts to adapt the organization to COTS solutions
- Apply modular development Project Management principles to support rapid delivery schedules; integrate IT projects with larger IT Architecture initiatives
- Integrate quality assurance practices into the modular development cycle

- Correlate requirements to support prioritization, modular development, identification of COTS solutions, and timely delivery schedules
- Manage the risks associated with modular development practices and Enterprise Architecture effect on Program and Project risk
- Translate IT Enterprise, Program, and Project initiatives in business terms for stakeholders
- Incorporate systems engineering practices into a modular development framework
- Formulate plans to support a systems life cycle using modular development techniques
- Incorporate testing and evaluation into modular system development efforts."